

## ABSTRACT

A typical probe comprises a sensor, and a connection head that includes a conversion circuit for driving the sensor. The probe communicates with a controller via a two wire DC 4-  
5 20mA link. The conversion circuit is also known as a two-wire transmitter. The conversion circuit and the sensor are connected to each other (and to the external link) via screw terminals usually located at the circuit top face. The invention provides a conversion circuit and a matching base forming plug and socket type connections. On the converter circuit, the connections are moved from the top of the circuit, to the bottom of the circuit, thus clearing  
10 space for an integral display. The sensor and the link wires are attached to the base socket. The conversion circuit fits into the socket in only a single orientation, thus ensuring correct coupling of the wires to the circuit elements.